

Changing the focus of an organization:

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FROM INFORMATION SYSTEMS TO PROCESS AWARE INFORMATION SYSTEMS

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Agenda

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- Introduction
- BP improvement initiative
- Project development
- Lessons learned and reflection
- Conclusions & future work

Introduction

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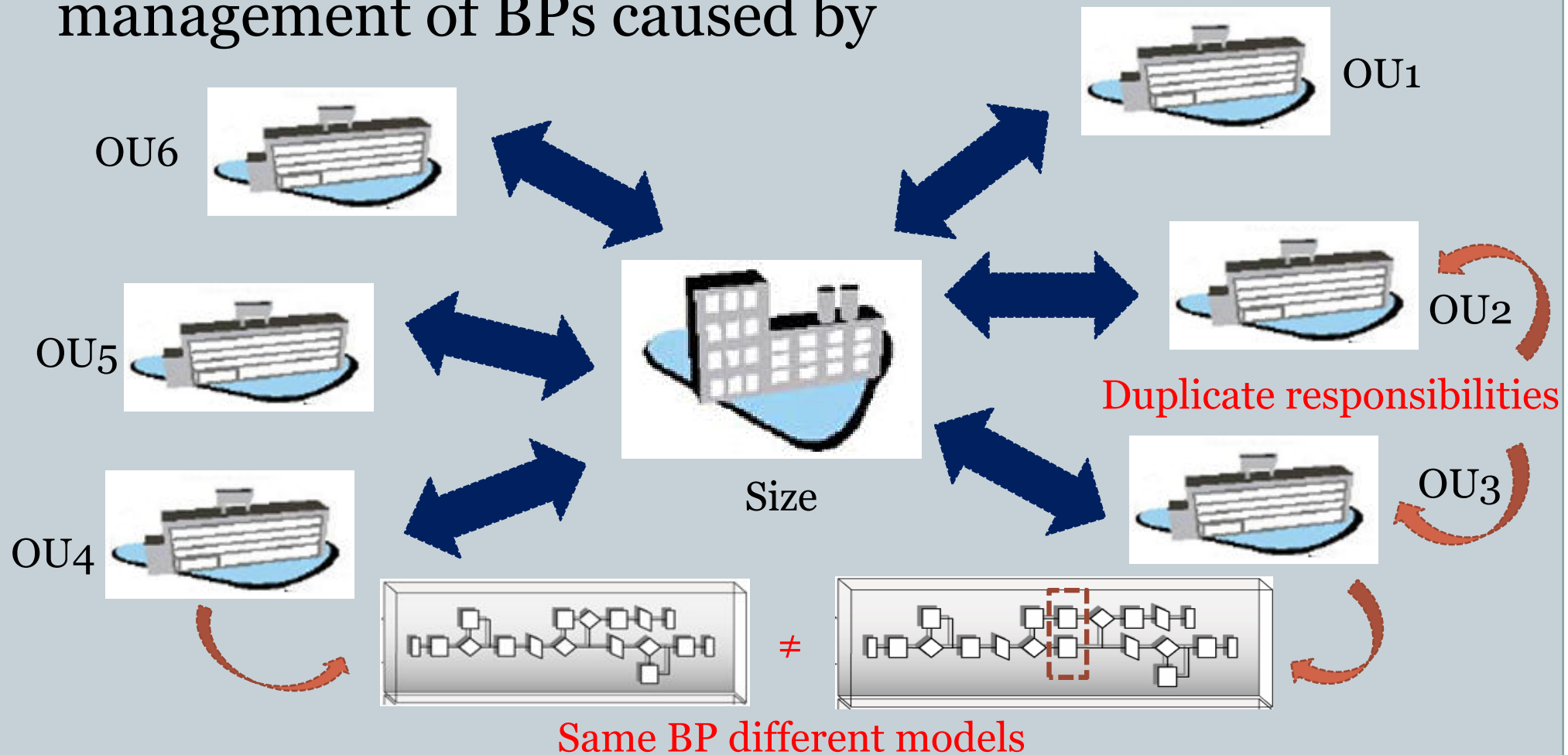
- Universidad de la República
 - Only public university of Uruguay most important regarding grade and postgraduate studies, and research
 - 10.000 teachers, 6.000 non-teaching staff, 100.000 students
 - Central organizational unit and 20 decentralized schools (Social, Medicine, Engineering, Chemistry, Architecture ...)
 - ✦ each unit with its own academic and management structures
 - Autonomous and co-managed by
 - ✦ Teachers, students and alumni → adds complexity to make decisions
 - BPMM → level 1: BPs are performed in an inconsistent way even ad-hoc, results are difficult to predict



Introduction

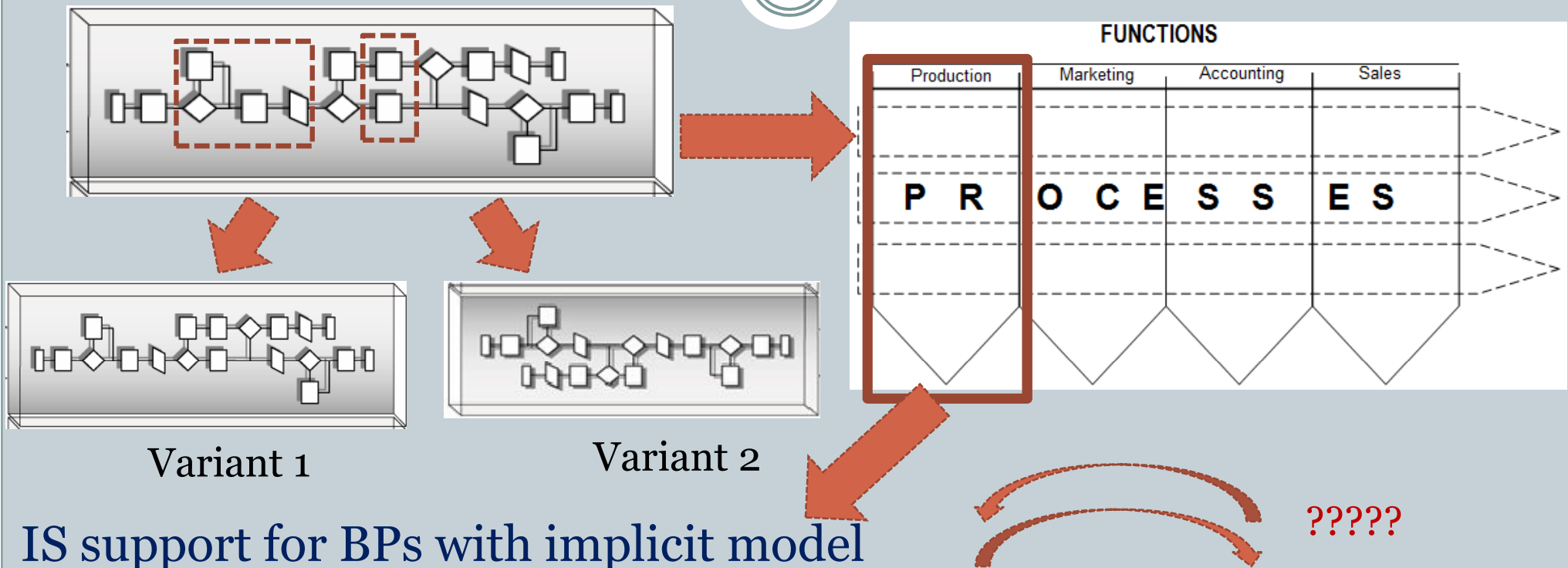
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- Organizational problems from poorly or non existing management of BPs caused by



Introduction

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IS support for BPs with implicit model

- no explicit control flow
- relying on people's knowledge
- improvements opportunities are not easily detected

Loan Request	Loan Assessment	Client Registration	Client Confirmation
Client	<input type="text"/>		
Amount	<input type="text"/>		
Account	<input type="text"/>		
Accept		Cancel	

Task A

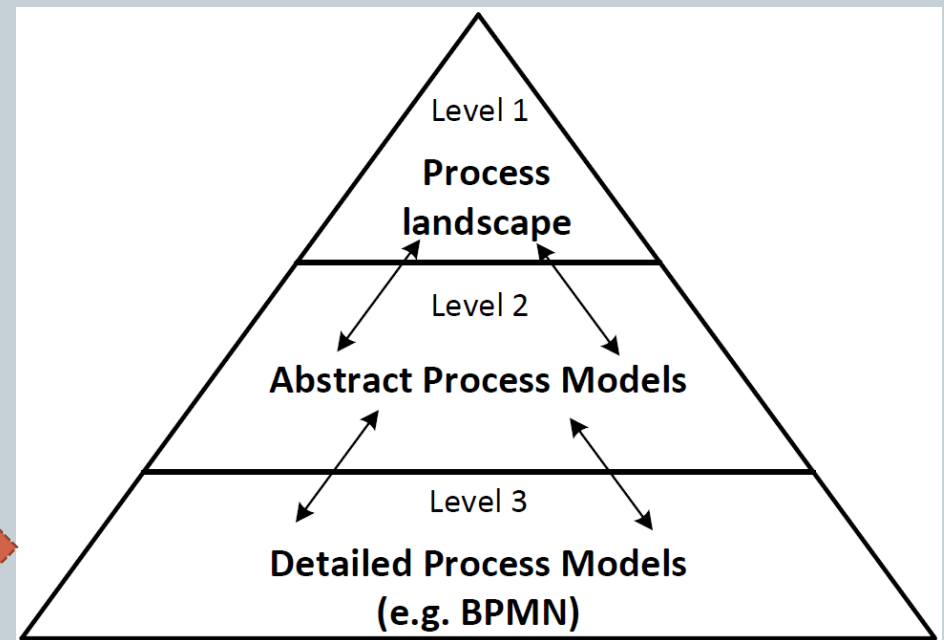
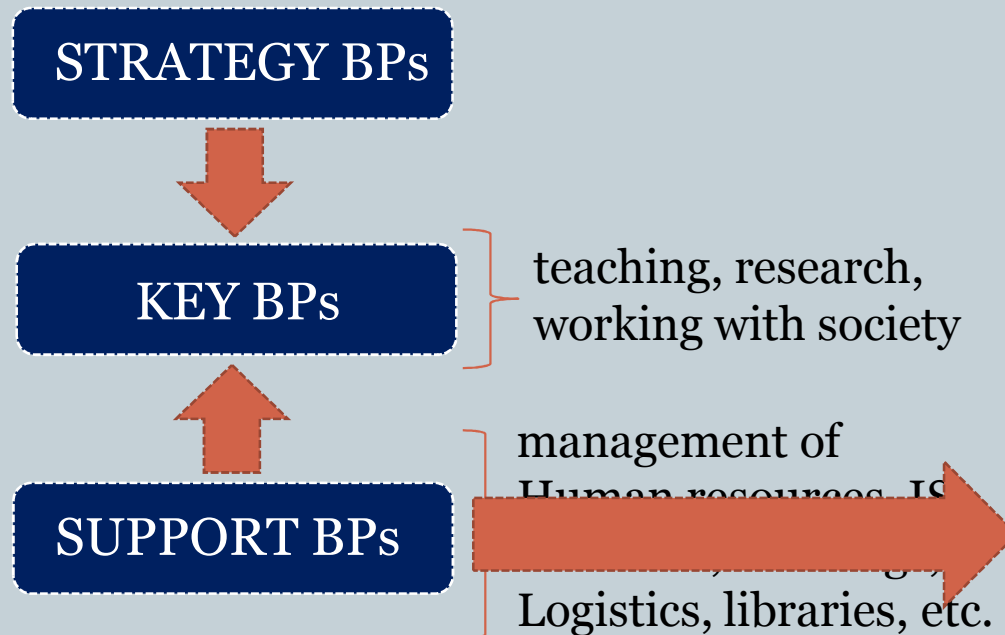
Loan Request	Loan Assessment	Client Registration	Client Confirmation
Client	<input type="text"/>		
Amount	<input type="text"/>		Background
Approve	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Accept		Cancel	

Task B

BP improvement initiative

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- Promoted and supported by
 - Management Improvement Group & Main management authority
- Main objective → improving managerial efforts
 - Defining a Process Architecture for management support BPs

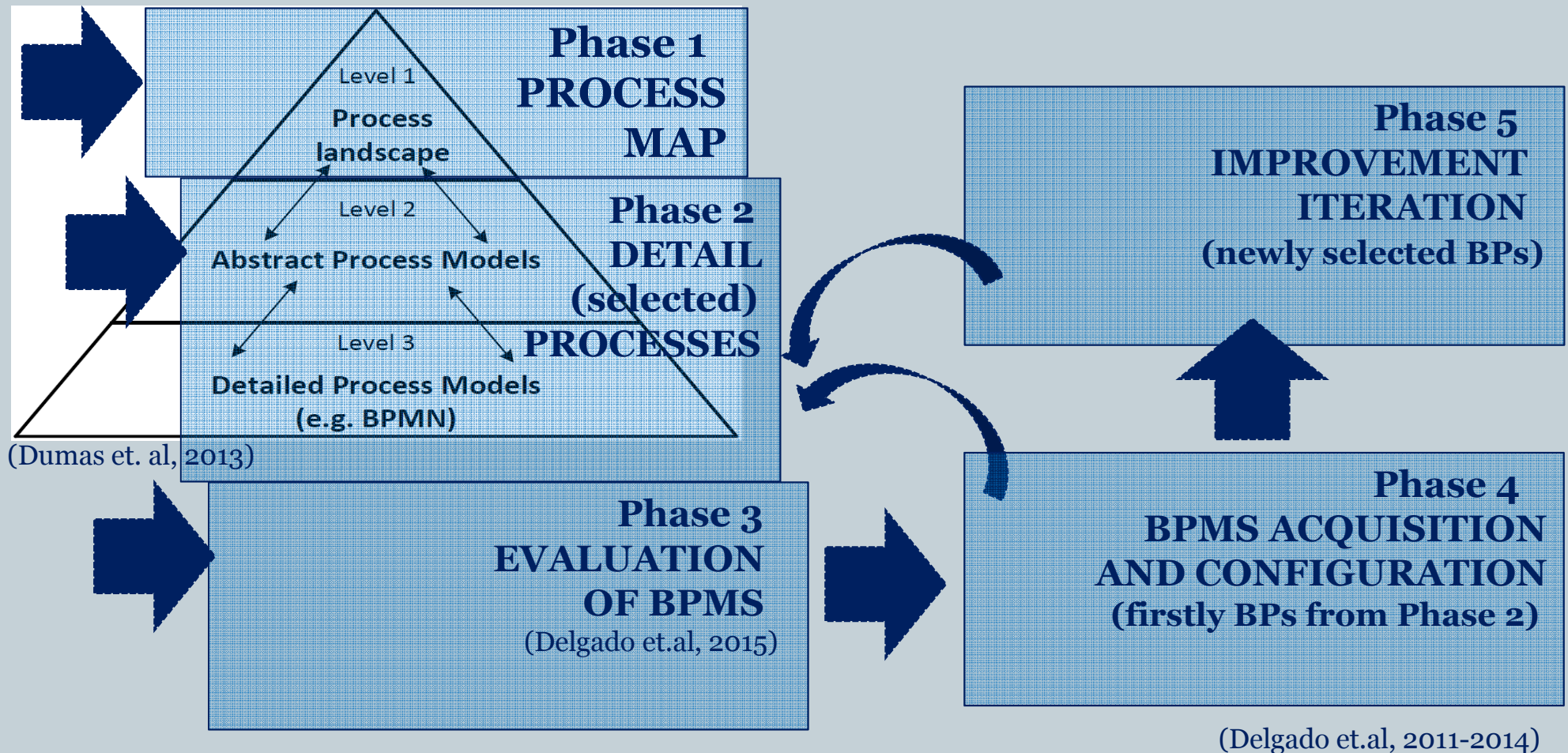


(Dumas et. al, 2013)

BP improvement initiative

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- Long term project divided into several phases



Project development

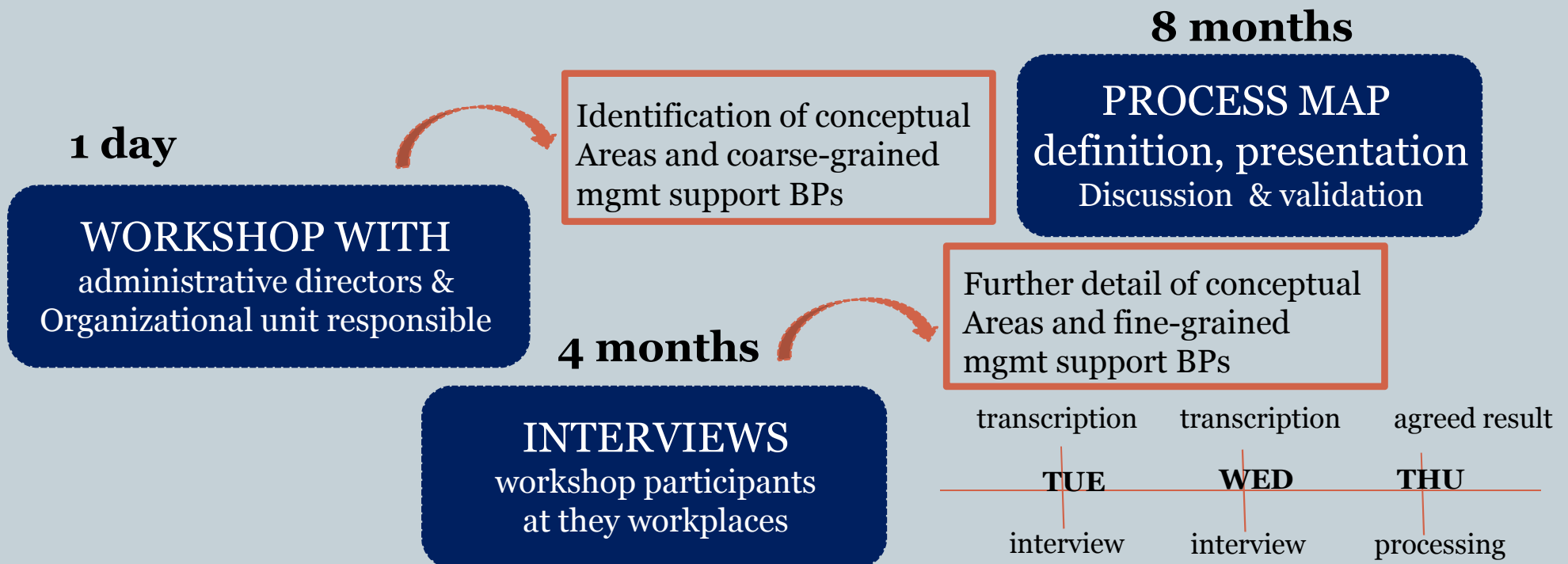
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- Initial project comprising Phases 1 and 2
 - May 2013 to April 2015 , one year each phase
 - Multidisciplinary team
 - ✦ 2 computer science researchers from COAL research group
 - ✦ 1 researcher from Economics and Business Administration
 - ✦ 1 professional from SeCIU (IT area of the University)
 - ✦ 2 professionals from the management team (sponsors)
 - Based on the BP Continuous Improvement Process (BPCIP) approach (Delgado et. al, 2011-2015) extending BP lifecycle (Weske, 2008)
 - ✦ following activities defined in the Analysis & Design phase
 - BM1 - Asses the organization, BM2 – Identify business processes, EM1 – Select Execution measures

Project development – Phase 1

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- Define a process map for the management support BPs
 - BM1 – Assessing the organization: Understand and specify
 - ✦ BPs, technological and human context, problems and improvements opportunities, stakeholders for the business modeling effort



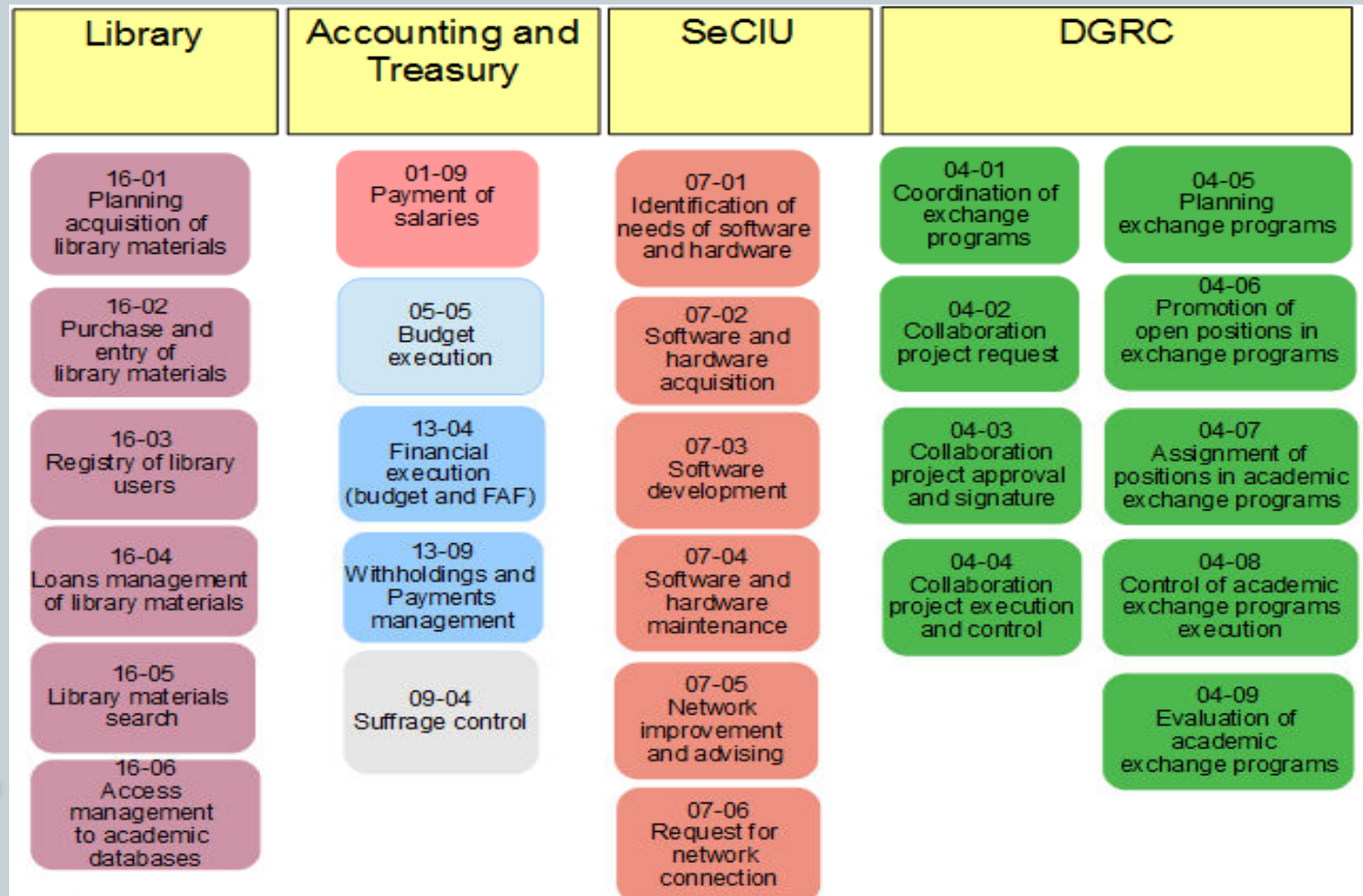
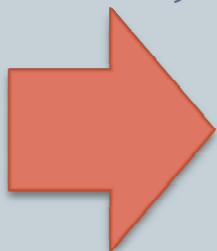
Project development – Phase 1

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• Result: Process map for the management support BPs

Two defined Levels

- Conceptual Areas (colours)
- Assignment to organizational units (responsible)

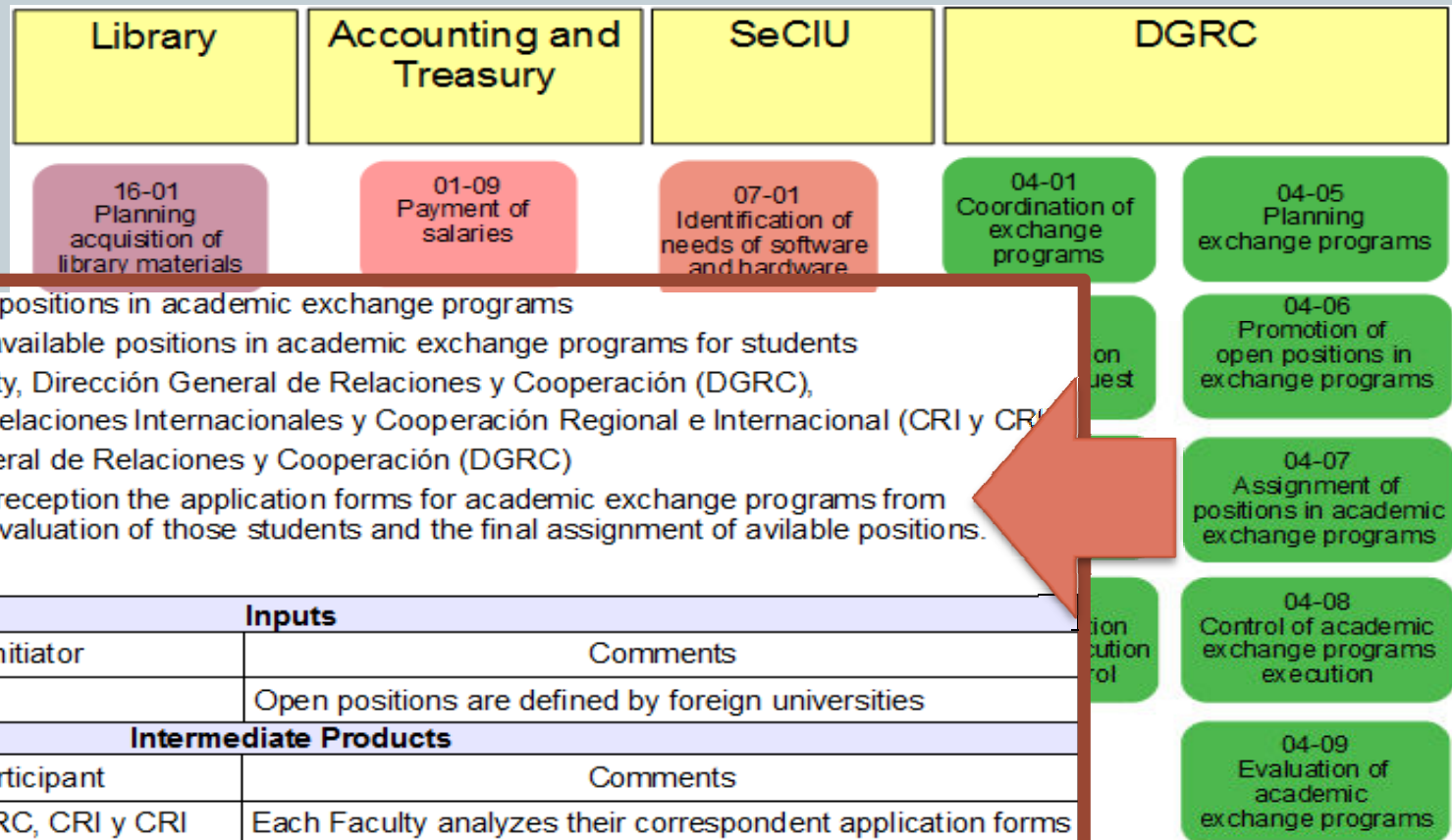


Project development – Phase 1

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• Result: Process map for the management support BPs

Each BP has an identification data sheet



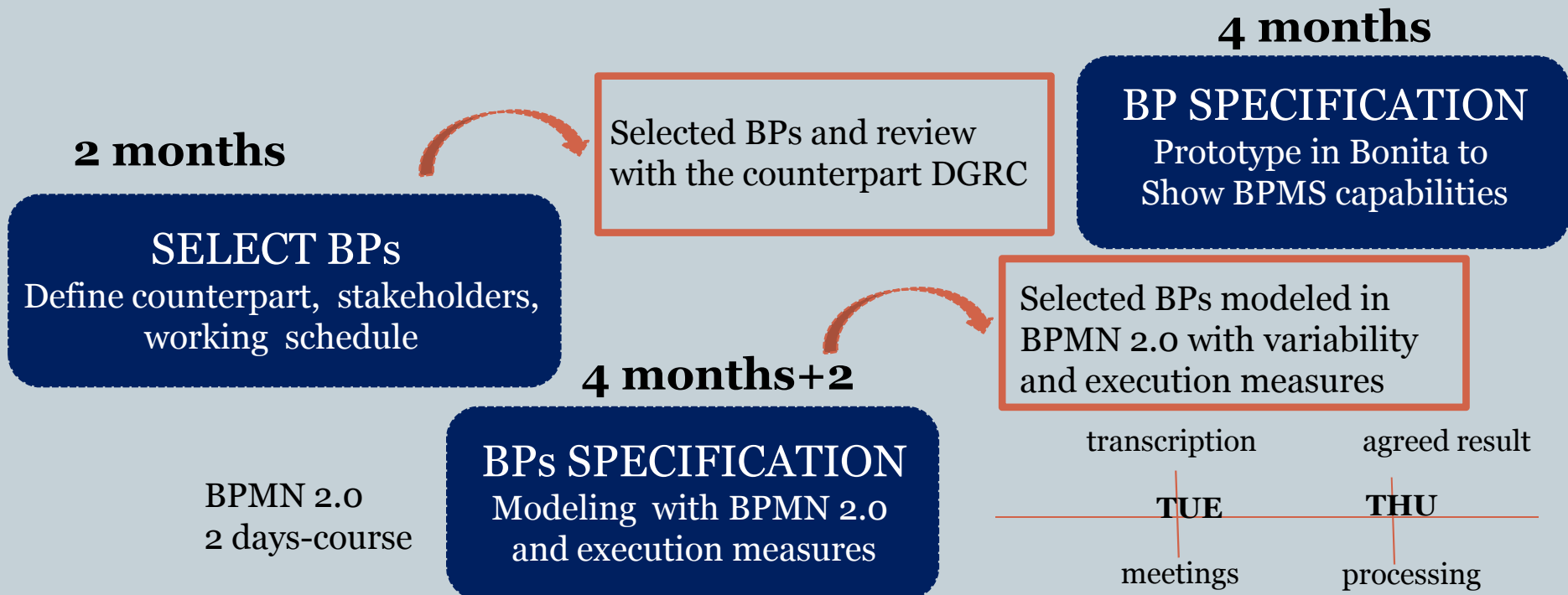
Process Name: Assignment of positions in academic exchange programs
Objectives: To assign the available positions in academic exchange programs for students
Participants: Student, Faculty, Dirección General de Relaciones y Cooperación (DGRC), Comisión de Relaciones Internacionales y Cooperación Regional e Internacional (CRI y CRI)
Owner: Dirección General de Relaciones y Cooperación (DGRC)
Description: It includes the reception the application forms for academic exchange programs from students, the evaluation of those students and the final assignment of available positions.
Software: No

Inputs		
Items	Initiator	Comments
Application forms	Student	Open positions are defined by foreign universities
Intermediate Products		
Items	Participant	Comments
Preliminary priority list	Faculty, DGRC, CRI y CRI	Each Faculty analyzes their correspondent application forms
Outputs		
Items	Receiver	Comments
Assignment list	Student, CRI, CRI	

Project development – Phase 2

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- Detail a set of priority BPs modeling with BPMN 2.0
 - BM2 – Identify BPs: Understand and specify in BPMN 2.0
 - ✦ Participant, roles, activities, gateways, events, control flow
 - EM1 – Select execution measures: for the BPs modeled before

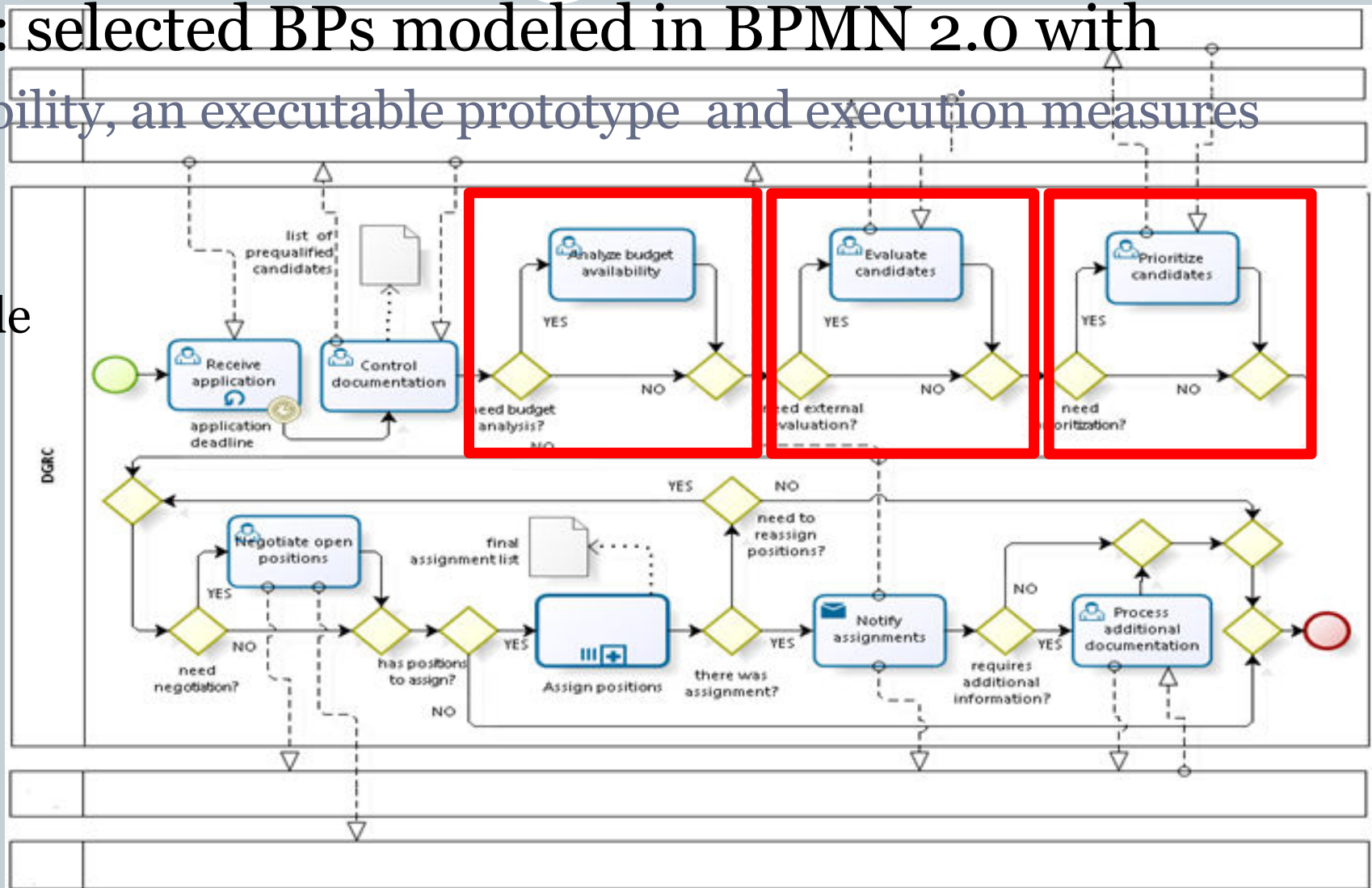


Project development – Phase 2

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- Result: selected BPs modeled in BPMN 2.0 with
 - Variability, an executable prototype and execution measures

Configurable
BP for
Exchange
Programs



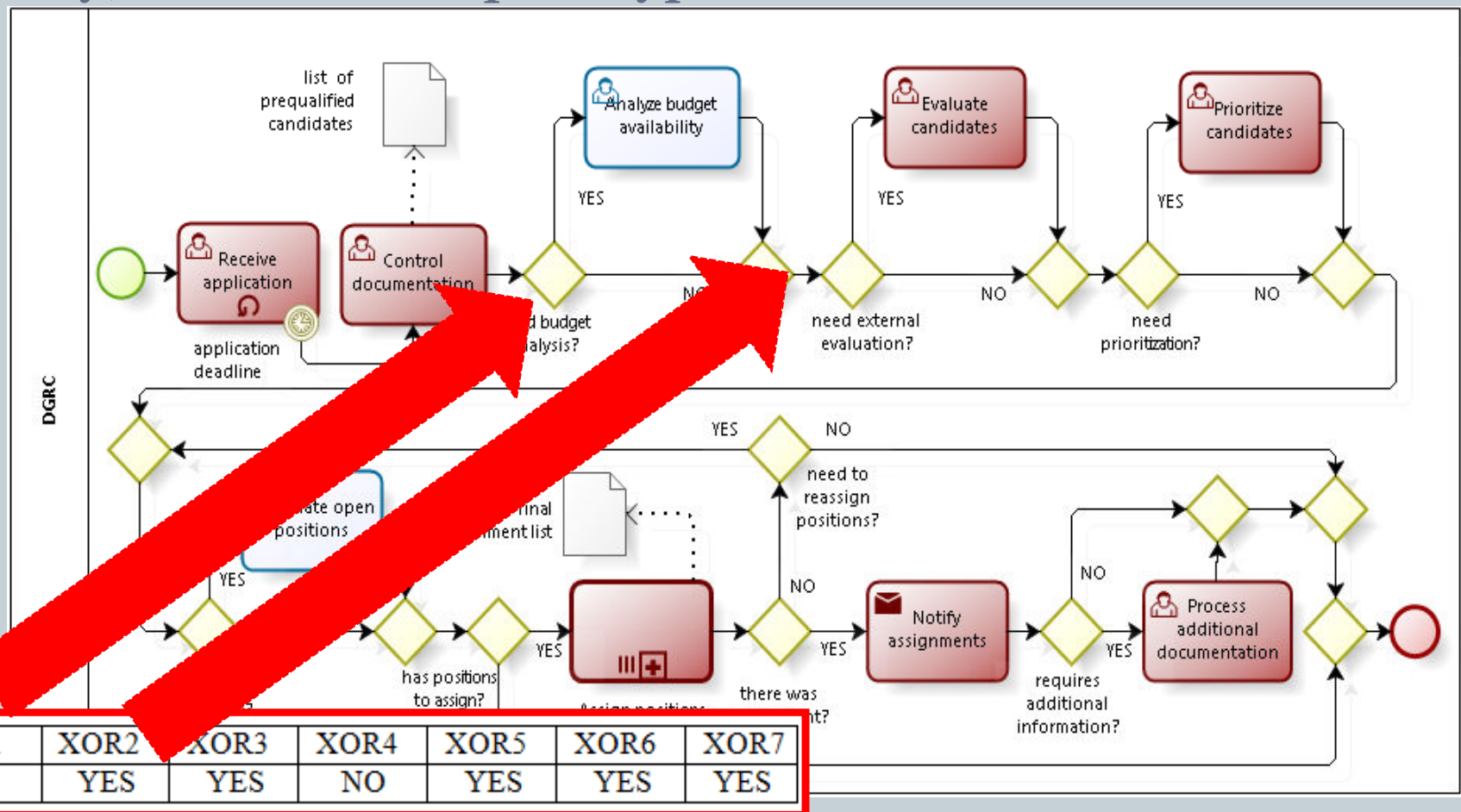
Project development – Phase 2

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- Result: selected BPs modeled in BPMN 2.0 with
 - Variability, an executable prototype and execution measures

Variant for Erasmus Mundus exchange program

Variability Data in DB



Lessons learned and reflection

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- Key driver for BPM success is organizational culture
 - Assessment of cultural level to know capabilities for BPM
 - Definition of a BPM group within the organizational structure
 - ✦ Left for next phases of the improvement initiative
- Process map as a strong communication artifact
 - approval of the resulting process map by the highest authority
 - some opponents trying to develop their own process map
 - process map levels and definitions not completely understood
- BPM team belonging to the organization
 - More openness from some people vs. resistance from fear

Lessons learned and reflection (2)

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- Horizontal vision of the organization based on BPs
 - Difficult to understand work beyond each organizational unit
- Four typical phases for management support BPs
 - Detection of needs, planning, implementation and control
- Short projects to identify, model and implement BPs
 - Training in BPMN 2.0 helps business people to “better see BPs”
 - Selection of measures to identify data to analyze and report
- Platform-independent initiatives to embrace BPM
 - Prototype in Bonita BPMS showed how the system will look
 - evaluate BPMS to support BPs vision in the organization

Conclusions & future work

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- The BPM improvement initiative we have carried out
 - gave the organization two main tangible results
 - ✦ a process map of management support BPs
 - ✦ a set of select BPs modeled in BPMN 2.0 and a system prototype
 - showed key elements in working with BPM
 - ✦ Value of multidisciplinary groups in defining and modeling BPs
 - ✦ Importance of stakeholders engagement in the project and BPMN 2.0
 - confirmed BPCIP as a suitable methodology
 - ✦ to guide a BPM improvement effort in this type of organizations
 - Led to interesting organizational discussions and reflection
 - ✦ some ideas were hard to transmit but the approach was well valued
 - Left us with open research fields regarding BPs variability

Changing the focus of an organization:

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